

Notice of Allowability

Application No.

09/884,884

Applicant(s)

HANKINS ET AL.

Examiner

Art Unit

Viet Q. Le

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 06/23/2005.
2. The allowed claim(s) is/are 1-7, 10-19, 22-26, 28, 30, 32, 33, 35, 37, 39 and 40.
3. The drawings filed on _____ are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____.
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

Best Available Copy

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone with Patrick J.S. Inouye on June 21, 2005 and on June 27, 2005.

The application has been amended as follows:

In The Claims

Claim 1: (currently amended): A system for dynamically identifying internal hosts in a heterogeneous computing environment with multiple sub-networks, comprising:

An analysis module analyzing a plurality of packets, each such packet comprising a source address of an originating host and a destination address of a receiving host; and

A classification module classifying an unknown originating host located at the source address of an outbound packet as an inside host with high confidence, classifying an unknown receiving host located at the destination address of an inbound

Art Unit: 2667

packet as an inside host, [[and]] reclassifying the unknown receiving host as an inside host with high confidence upon receiving a further outbound packet having a source address corresponding to the address of the unknown receiving host, managing packet traffic flow by monitoring the packets and adjusting control flow thereof, and ignoring packet traffic flow for each packet with an originating host or a receiving host classified as an inside host with high confidence.

Claim 8: (canceled)

Claim 9: (canceled)

Claim 13: (currently amended): A method for dynamically identifying internal hosts in a heterogeneous computing environment with multiple sub-networks, comprising:

Analyzing a plurality of packets, each such packet comprising a source address of an originating host and a destination address of a receiving host;

Classifying an unknown originating host located at the source address of an outbound packet as an inside host with high confidence;

Classifying an unknown receiving host located at the destination address of an inbound packet as an inside host; [[and]]

Reclassifying the unknown receiving host as an inside host with high confidence upon receiving a further outbound packet having a source address corresponding to the address of the unknown receiving host;

Managing packet traffic flow by monitoring the packets and adjusting control flow thereof; and

Ignoring packet traffic flow for each packet with an originating host or a receiving host classified as an inside host with high confidence.

Claim 20: (canceled)

Claim 21: (canceled)

Claim 25: (currently amended): A computer-readable storage medium holding code for performing the method according to Claims 13, 14, 15, 16, 17, 18, 19, 20 and 21 or 19.

Claim 26: (currently amended): A system for classifying hosts in a heterogeneous computing environment, comprising:

A table storing records comprising a plurality of states which each specify a location of a host relative to a network domain boundary, the states comprising:

An *Unknown* state describing an undefined host;

An *Outside* state describing a host located outside the network domain boundary;

An *Inside* state describing a host provisionally located inside the network domain boundary; and

An *Inside with High Confidence* state describing a host located inside the network domain boundary;

A traffic manager classifying the hosts based on source address with each outbound packet originating from an *Unknown* state, *Outside* state or *Inside* state into an *Inside with High Confidence state and state*, classifying the hosts based on destination address with each inbound packet originating from an *Unknown* state or *Outside* state into an *Inside with High Confidence state*, classifying the hosts based on

source address with each inbound packet originating from an *Unknown* state into an *Outside* state, classifying the hosts based on destination address with each outbound packet originating from an *Unknown* state into an *Outside* state, and ignoring packet traffic based on source address or destination address with each outbound packet and each inbound packet originating from an *Inside with High Confidence* state.

Claim 27: (canceled)

Claim 29: (canceled)

Claim 31: (canceled)

Claim 33: (currently amended): A method for classifying hosts in a heterogeneous computing environment, comprising:

Defining a plurality of states which each specify a location of a host relative to a network domain boundary, the states comprising:

An *Unknown* state describing an undefined host;

An *Outside* state describing a host located outside the network domain boundary;

An *Inside* state describing a host provisionally located inside the network domain boundary; and

An *Inside with High Confidence* state describing a host located inside the network domain boundary;

Classifying the hosts based on source address with each outbound packet originating from an *Unknown* state, *Outside* state or *Inside* state into an *Inside with High Confidence* state; [[and]]

Classifying the hosts based on destination address with each inbound packet originating from an *Unknown* state or *Outside* state into an *Inside with High Confidence* state;

Classifying the hosts based on source address with each inbound packet originating from an *Unknown* state into an *Outside* state;

Classifying the hosts based on destination address with each outbound packet originating from an *Unknown* state into an *Outside* state; and

Ignoring packet traffic based on source address or destination address with each outbound packet and each inbound packet originating from an *Inside with High Confidence* state.

Claim 34: (canceled)

Claim 36: (canceled)

Claim 38: (canceled)

Claim 40: (currently amended): A computer-readable storage medium holding code for performing the method according to Claims 33, [[34,]] 35, [[36]] or 37.

Allowable Subject Matter

2. Claims 1-7, 10-19, 22-26, 28, 30, 32-33, 35, 37, 39-40 are allowed.

3. The following is an examiner's statement of reasons for allowance:

The prior art does not disclose or fairly suggest wherein an apparatus or a method having the following features of the invention:

A classification module classifying an unknown receiving host located at the destination address of an inbound packet as an inside host, and reclassifying the unknown receiving host as an inside host with high confidence upon receiving a further outbound packet having a source address corresponding to the address of the unknown receiving host as indicated in independent claims 1, 13, 25 & 40.

A traffic manager ignoring packet traffic based on source address or destination address with each outbound packet and each inbound packet originating from an inside with high confidence state as indicated in independent claims 1, 13, 25, 26, 33 & 40.

It is noted that the closest prior art, McNamara (U.S. 6,262,976), shows classification of packets into different classes. However, McNamara fails to disclose the underlined limitations as described above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q. Le whose telephone number is 571-272-2246. The examiner can normally be reached on 8 AM -5 PM.

Art Unit: 2667

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VL


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 
6/27/68

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.